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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,148	02/20/2004	Craig M. Ruecker	2997-19-1	5350

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EXAMINER
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DAVIS, RUTH A

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/784,148

Applicant(s)

RUECKER ET AL.

Examiner

Ruth A. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,8,10-12,14-15,18-21,23-25,35-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-4,8,10-12,14,15,18-21 and 23-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/04;1/05;6/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of group III, claims 35 - 37 in the reply filed on June 8, 2005 is acknowledged. The traversal is on the ground(s) that the inventions are related and thus have overlapping searches. This is not found persuasive because while the searches for the various group may overlap, an overlapping search is not a coextensive search. Moreover, a reference that would anticipate one group may not anticipate or even make obvious the invention of another group.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1 - 4, 8, 10 - 12, 14 - 15, 18 - 21, 23 - 25 and 35 - 37 are pending; claims 1 - 4, 8, 10 - 12, 14 - 15, 18 - 21 and 23 - 25 are withdrawn from consideration; claims 35 - 37 have been considered on the merits.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 35 - 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 35 and its dependents are drawn to a method for obtaining lipids from microorganisms, however are rendered vague and indefinite because it is unclear if step (g) is producing a second phase separated mixture. The steps are further confusing in step (h) because it is unclear if the heavy layer is removed from the first phase separated mixture for the second time, or if the heavy layer from a potential second phase separated mixture is separated.

In claim 35, step (h), "said heavy layer" appears to lack antecedent basis. While a heavy layer is earlier referred to, this step appears drawn to a second phase separated mixture, which does not mention a heavy layer.

The claims are further confusing because the steps do not appear to finally obtain a lipid from a microorganism. The lipid appears to become non-emulsified, but the claims fail to include a step which actually results in obtaining a lipid.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 35 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gudin et al. (US 5179012) in view of Wagner et al. (US 4720456).

Applicant claims a process for obtaining lipids from a microorganism, the method comprising (a) growing the microorganism in a fermentation medium, (b) contacting the medium with a base, (c) increasing the temperature to at least about 50C to lyse the cells, (d) separating substances with different densities to produce a phase separated mixture with a heavy and light layer, (e) removing the heavy layer, (f) adding a washing solution to light layer, (g) separating substances with different densities from the mixture, (h) removing a heavy layer from the second phase separated mixture, (i) repeating steps (f) – (h) until the lipid becomes substantially non-emulsified.

Gudin teaches methods for obtaining liposoluble components from microorganisms, the method comprising culturing the microorganism in a medium, grinding the organism and separating the phases via centrifugation in order obtain the desired components (abstract, col.2,4).

Gudin does not teach the method wherein the fermentation medium is contacted with a base, or wherein the temperatures are raised to at least 50C. However, Wagner teaches methods for obtaining liposoluble components from microorganisms wherein the culture medium is adjusted with alkaline metal hydroxides and cultured at temperatures of 50C (col.4,5). Wagner

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teaches the addition of hydroxide increases yield of lipids (col.5). At the time of the claimed invention, it would have been obvious to one of ordinary skill in the art to culture microorganisms at about 50C in the presence of hydroxides for the disclosed advantages of increased lipid yields. Moreover, at the time of the claimed invention, one of ordinary skill in the art would have been motivated by the cited references to add bases to the culture mediums of microorganisms with a reasonable expectation for successfully obtaining lipids and liposoluble components. Although the references do not specifically teach multiple separation of the phases, it would have been well within the purview of one in the art to optimize the number of washings and separations as a matter of routine experimentation. Thus, one of ordinary skill in the art would have had a reasonable expectation for successfully obtaining lipids.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth A. Davis whose telephone number is 571-272-0915. The examiner can normally be reached on M-F 7:00 - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ruth A Davis  
July 13, 2006  
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